

Bay-Delta Sport Fishing Enhancement Stamp Description and Status of Funded Projects

Updated February 2010

1. Striped Bass Fishing Maps Reprint – \$8,533.76

Stamp funds and Sport Fish Restoration Act funds were used to pay for the reprint of striped bass fishing maps.

Project Status: Completed in 2005.

2. Central Valley Angler Survey – \$1,200,000

The Central Valley Angler Survey (CVAS) is funded by a (five-year) Sport Fish Restoration Act grant (75%) and the Bay-Delta Sport Fishing Enhancement Stamp (25%). The survey area includes the Sacramento, Feather, Yuba, American, Mokelumne, and Calaveras rivers, and the Sacramento-San Joaquin Delta. The objective is to survey anglers, analyze collected data, and prepare reports estimating angler effort, catch, and harvest for all major fish species. The focus of the survey is on anadromous fish species: Chinook salmon, steelhead/rainbow trout, sturgeon, striped bass, and American shad. Data collected from this survey will allow for continued management of anadromous sport fisheries in the Central Valley, while also minimizing fishing impacts to listed steelhead. In addition, the CVAS works closely with the Department's Ocean Salmon Project to provide data on the inland recreational fishery as input to the salmon management process of the Pacific Fishery Management Council.

Project Status: In progress.

3. Turtle Bay Boating and Fishing Access Facility – \$40,500

Stamp funds were used to support angler access improvements at the Turtle Bay Access Facility on the Sacramento River in Redding. Improvements paid for by the Stamp include restroom upgrades, a grass access ramp, night lighting, informational panels, and addition of accessible parking and loading zone.

Project Status: Completed in 2007.

4. Aquarium in the Classroom Program – \$10,000

The Aquarium in the Classroom Program is located in the Bay Area and provides teachers with equipment, support, and training so they can provide their classrooms

with meaningful curriculum on salmonids. The community also participates in these programs. The teachers and the community guide the students through the salmon rearing and release process. Stamp funds were used to purchase aquariums, chillers and educational DVD's.

Project Status: Completed in 2006.

5. Central Valley Hatchery Salmon Acclimation Program – \$343,992.34

The Department of Fish and Game contracted with the Fishery of Foundation of California in 2007 for \$49,992.34 and again in 2008 to 2010 for \$294,000.00 to acclimate all Central Valley hatchery Chinook salmon smolts and release them into San Pablo Bay. This project reduces transport stress on the young salmon and increases their chances of survival to adults.

In spring and early summer, Chinook salmon smolts are trucked from Nimbus, Mokelumne River and Feather River fish hatcheries to release sites near San Pablo Bay and Carquinez Strait. At the release sites, up to six hatchery trucks offload their shipment of young salmon into floating net pens. The pens are immediately covered with netting to prevent predation by birds, fish, and marine mammals, or the escape of any of the new possibly disoriented jumping fish. The fish are then allowed to settle and acclimate in the pens to the new water conditions for between one to three hours. Once the tides are outgoing, the nets are towed out into the deep water channel and the salmon are released. In 2008, 20 million young salmon were placed in net pens and released into San Pablo Bay.

Project Status: In progress.

6. Sturgeon Forensics – \$170,880.31

A major threat to California's white sturgeon population is the illegal take and commercialization of this resource. Sturgeon caviar and meat are both sold on the "black market" and is a financial incentive for active and would-be poachers. Officials in the DFG Enforcement Branch have identified the commercialization of white sturgeon as a high priority for enforcement and requested that the Wildlife Forensic Laboratory develop forensic techniques to assist enforcement in two different areas:

1. To differentiate farm raised white sturgeon caviar from wild white sturgeon caviar.
2. To be able to assign white sturgeon forensic samples to a specific watershed or to a specific population of fish and to have the ability to match or exclude forensic samples.

Project Status: Completed in 2009.

7. South Bonnyview Boating and Fishing Access Improvements – \$203,500

The Stamp Program is providing funds to the City of Redding for angler access improvements to the South Bonnyview Boating and Fishing Access Facility on the Sacramento River. Improvements to the facility include addition of an ADA-compliant fishing platform, 0.7 miles of angler access trails, new picnic facilities, and enhanced restrooms.

Project Status: In progress.

8. Upper Sunrise Boat Launch Facility Improvements – \$100,000

Stamp funds were used for improvements to the Upper Sunrise Boat Launch Facility on the lower American River. Improvements to the boat launch facility include replacement of the boat launch ramp, realignment of the boating access and recreational trail, improvements to the restroom and parking facilities, and ADA-compliant access to the boating facilities.

Project Status: Completed in 2009.

9. Economic Analysis of Sport Fishing in the Central Valley, California – \$228,208.50

The Stamp Program and Striped Bass Stamp Fund are co-funding the Program for Applied Research and Evaluation at California State University, Chico to conduct an economic analysis of the impact of fishing for striped bass, halibut, black bass, steelhead and Chinook salmon in the Bay-Delta and Sacramento-San Joaquin river system.

Project Status: In progress.

10. New Salmon Rearing Net Pen - \$26,732.81

Stamp funds were used to purchase a new floating net pen for the San Francisco Tyee Club's salmon rearing project.

Project Status: Completed in 2009.

11. Upper Sacramento River Basin Chinook Salmon Escapement Monitoring - \$514,179

Stamp funds are being used to monitor the annual abundance, migration timing, and distribution of adult fall-run Chinook salmon returning to spawn throughout the Upper Sacramento River Basin in 2009 through 2011.

Project Status: In progress.

12. Lower Merced River Spawning Habitat Restoration Phase I - \$24,882.13

Stamp funds were used to provide a one-time addition of suitable spawning gravels (approximately 1.2 acres or 1,200 tons of gravel) in the first riffle immediately downstream from the Crocker-Huffman Diversion Dam in the lower Merced River. This will replenish depleted spawning gravels for steelhead/rainbow trout and improve Chinook salmon spawning habitat.

Project Status: Completed in 2009.

13. Feather River Hatchery Chinook Salmon Coded Wire Tagging - \$32,079.80

For consistency with the on-going Central Valley-wide Constant Fractional Marking/Tagging Program, the Brood Year 2008 fall-run Chinook salmon reared at Feather River Hatchery Annex will need to be marked and coded-wire tagged at a 25% rate in the spring of 2009. This program will provide valuable data for improved management of ocean and inland fisheries, assessment of the effectiveness of habitat improvement programs, and evaluation of hatchery programs. Pacific States Marine Fisheries Commission currently operates the Central Valley CFM program as a unified program, with funding from U.S. Bureau of Reclamation, East Bay Municipal Utilities District, and Department of Water Resources. The Stamp Program provided funds for supplies and personnel needed for the marking/tagging of fish reared for enhancement purposes at Feather River Annex in 2008/09.

Project Status: Completed in 2009.

14. Untied Anglers of Casa Grande Chinook Salmon Tagging Program - \$105,090.77

Stamp funds will be used to launch a tagging program for Chinook salmon at the United Anglers of Casa Grande (UACG) conservation fish hatchery. Data are needed to evaluate the success of the UACG's hatchery-based supportive breeding program in meeting release objectives. A tagging program would allow the UACG to determine: (1) the relative contribution of UACG hatchery fish to the ocean commercial and sport fishery; (2) the return rates of UACG hatchery fish; (3) if UACG hatchery fish are recovered elsewhere in the Central Valley; and (4) the relative contribution of UACG hatchery fish to the Bay-Delta inland sport fishery. The Stamp Program will fund the UACG's tagging program for three years beginning in spring of 2009.

Project Status: In progress.

15. Fish Cleaning Station at Discovery Park - \$89,000

The County of Sacramento Department of Regional Parks will receive Stamp funds for the installation of a fish cleaning station at Discovery Park. This project will provide anglers with a clean, sanitary facility for fish cleaning and waste disposal.

Project Status: Contract pending.

16. Tiburon Salmon Institute - \$49,982.90

The Stamp Program is providing funds to the Tiburon Salmon Institute (TSI) for educational and public awareness events and to install and manage salmon rearing net pens. Stamp funds will pay TSI to: (1) coordinate, plan and carryout the Salmon Kiss and Release program in May and October; and (2) install salmon rearing net pens at the Romberg Center (San Francisco State University) in Tiburon and manage the fish in the pens until they are released.

Project Status: In progress.

17. Sturgeon Punch Card – \$21,511

Stamp funds were used to pay for the printing and distribution of the Sturgeon Punch Card in 2009. Stamp funds were used to cover these costs so anglers would not be charged for the punch card. Information gathered from the punch card will enable the Department to better control poaching, calculate a stronger population abundance estimate, and better understanding the fishery.

Project Status: Annually since 2009.

18. Stamp Printing - \$5,874.00

In 2009, Stamp funds were used to print 440,000 stamps.

19. Department of Fish and Game Law Enforcement Division - \$250,000 Annually

The Law Enforcement Division of the Department of Fish and Game is seeing increased non-compliance from sport fishers in the Bay-Delta region. Citation numbers are on the increase as activity levels remain constant. Increased uniformed patrols are proactive and tend to promote compliance with existing laws. With current warden staffing levels being the lowest per capita in the nation, additional funds are needed to have the limited number of wardens available be as visible as possible over the greatest timeframe.

Beginning in 2009, the Department of Fish and Game Law Enforcement Division will receive \$250,000 in Stamp funds annually. Access to stamp monies will provide the warden force with an opportunity for enhanced and directed patrols focused solely on the Bay-Delta region and the surfacing law enforcement issues. Enhanced patrols would include overtime opportunities for those wardens in and around the region to work specific hot spots and areas identified with increased violations. These overt patrols improve compliance with the laws and protect Bay-Delta fisheries.

Project Status: Annually since 2009.

20. Acoustic Tagging and Genetics of Adult Chinook Salmon in the Lower Yuba River - \$209,962

This project would determine: 1) if adult spring-run Chinook salmon are genetically distinct from fall-run Chinook salmon in the lower Yuba and Feather rivers; 2) the spatial and temporal distribution of acoustic tagged adult spring-run Chinook salmon in the lower Yuba River or movement into other California Central Valley watersheds; and 3) what habitats adult spring-run Chinook salmon are using for holding and spawning in the lower Yuba River.

This project will enhance fishing activities on the lower Yuba River by providing scientific information to substantiate or simplify current fishing regulations. Current regulations involve six categories of time and reach restrictions for salmon fishing, some of which represent precautions for excess take of salmon believed to be sensitive spring-run Chinook. Anglers commonly express frustration over the complexity of these regulations not substantiated by scientific data.

Project Status: Beginning Spring 2010.

21. Contribution of hatchery and natural origin Chinook salmon to the lower Yuba River - \$112,580

This projects aims to benefit anglers, fisheries, and increase angling opportunities by providing critical information necessary for the recovery and sustainable management of Chinook salmon stocks in California. By measuring 87Sr/86 ratios in the juvenile portions of adult otoliths (ear bones) we can identify the specific birthplaces (e.g., hatcheries and rivers) of adult Chinook salmon. The information would be used to fill a fundamental data gap in the understanding of the contribution rate of hatchery and natural origin Chinook salmon to the lower Yuba River spawning population.

Project Status: Beginning Spring 2010.

22. Delta Water Pollution Monitoring and Enforcement Project - \$74,440

This project will monitor and identify sources of water pollution throughout the project area with remote water meters. Once a pollution generator is identified, enforcement personnel will investigate and take appropriate enforcement action as necessary. DFG enforcement personnel will coordinate with California Regional Water Quality Control Board personnel to develop long-term solutions with landowners or facility operators to prevent future discharges. Water pollution monitoring and enforcement actions will improve water quality for all aquatic species.

Project Status: In progress.

23. Lower Merced River Spawning Habitat Restoration Phases II & III - \$113,940

This project will provide multiple additions of suitable spawning gravels (approximately 2.4 acres or 3000 tons of gravel). This will provide salmonid habitat restoration for approximately 15 years. This project has four objectives: 1) improve recreational fishing in 15 miles of the Merced River; 2) replenish depleted spawning gravels for steelhead/rainbow trout; 3) develop a self-sustaining population of anadromous steelhead/rainbow trout; and 4) improve Chinook salmon spawning habitat.

Project Status: 2010 and 2011.

24. In-river Movement Study of Rainbow Trout/Steelhead on the Lower Yuba River – 423,294

This is a multi-year study to monitor the movement patterns of wild juvenile and adult steelhead /rainbow trout in the lower Yuba River. Utilizing acoustical tags and in-stream, hydrophones, this project will track tagged trout movements, habitat selection, and evaluate tracking techniques over multiple seasons, and flow conditions. Understanding the movement of rainbow/steelhead trout will help agencies better manage the trout populations on the lower Yuba River, thus providing anglers with a continued sport fishing opportunity for wild resident/anadromous trout in the Central Valley.

Project Status: In progress.

25. San Joaquin River System Sturgeon Tagging and Acoustic Receiver Installation Program - \$28,750

This project will result in an increased understanding of the migratory behavior and distribution of green and white sturgeon within the San Joaquin River system. This project will extend the existing receiver array in the San Joaquin River system to close data collection gaps about the distribution of all acoustically tagged species using the San Joaquin River System. In addition, it will determine movement and habitat use patterns of sturgeon in the San Joaquin River system by implanting sturgeon with acoustic tags.

Project Status: In progress.

26. Size and Age at First Maturity and Fecundity of California Halibut in the SF Bay Area - \$9,386

This study will ensure the long-term sustainability of the halibut resource for the use and enjoyment of the public by providing DFG managers with essential fisheries information for regulatory decisions. There are three project objectives: 1) determine the length and age at first maturity for California halibut from San Francisco Bay (these data may be used to evaluate minimum size limit regulations); 2) determine a fecundity estimate

of female California halibut from San Francisco Bay; and 3) contribute to the otolith data set used in an ongoing age/length study in the Finfish Management Project.

Project Status: In progress.

27. Effects of Water Temperature on Hooking Mortality and Migration of the Steelhead Fishery Resources in the Lower American River - \$461,602

This three-year study will provide information on the distribution of the steelhead fishery resource and could potentially increase fishing opportunities for anglers on the lower American River. Information from this study could be used to optimize management of Central Valley steelhead, including recommendations for protective measures that will foster recovery of steelhead in the Central Valley, California ESU, thus enhancing future angling opportunities.

Project Status: To begin in July 2010.

28. Central Valley Hatchery Acclimation Program - \$380,905

This project will acclimate all yearling salmon released in the San Pablo Bay/Carquinez Strait area in 2011-2013. Up to 21 million yearlings will be released annually. In addition, the program will explore opportunities to increase the number of release sites to further reduce predation. This project increases survival of acclimated Chinook salmon and will improve harvest opportunities for recreational and commercial anglers.

Project Status: To begin in 2011 and continue through 2013.

29. Outdoor California Magazine Salmon Issue Reprint - \$9,999.56

Stamp funds were used to pay for a reprint of the Outdoor California Magazine, Salmon Crisis Special Issue, for distribution to the public at the International Sportsman Expo in San Mateo and Sacramento and the Fly Fishing Show in Pleasanton, California. The magazines will also be distributed at other sportsman shows and sport fisheries-related events in the Central Valley and Northern California.

Project Status: In progress.